Composition of and Collaboration Among Communication Scholars in Twenty Years of ICA Journals (2000-2022)

Abstract

The persisting legacies of colonialism have called for scholars to be more active in their efforts to dismantle and decenter the normative foundations of Whiteness in scholarly practices. Given that similar problems persist in communication, the current paper examines the intersectional structures of authors and collaboration patterns among scholarly teams. By analyzing the race, gender, institution type, and institution country of origin of ICA authorship between 2000–2022, we find stark disparities within collaborations across individual identities and institutional partnerships. We offer insights into how these patterns reproduce structural inequalities and create barriers to advancing the field in more diverse and inclusive ways. We propose future directions scholars in the field can take to support and participate in the ongoing work to dismantle and decenter Whiteness in academia.

Keywords: Communication, Race, Gender, Collaboration Pattern, Whiteness, Intersectionality, Inequality, Bibliometric Analysis

Introduction

The International Communication Association (ICA) began over seventy years ago as a small group of United States-based researchers to provide a space for developing, conducting, and critically evaluating communication research. Today, the organization has grown to represent over 80 countries and 6,500 members (Contractor, 2022) across various cultural backgrounds and multidisciplinary perspectives within Communication. However, despite the seemingly diverse and supportive international network of ICA, recent scholarship has noted the persistent lack of diverse and inclusive practices within leadership and publication procedures in communication scholarship (Chakravartty et al., 2018; Mayer et al., 2018). Chakravartty et al. (2018) examined racial disparities in authorship and found that scholars identified as non-white only made up 6% of authorship by 1990 and 12% by 2010. In studying gender disparities in authorship, Mayer et al. (2018) found that although women are more represented overall, men led 84% of publications and cited other men more frequently, while women cited women more than twice as much. Overall, conference acceptances, organization leadership, publication, and citation practices reflect predominantly white male scholars from the U.S. and Western Europe, preserving the hierarchical values of the U.S-Eurocentric, patriarchal white supremacy (Chakravartty et al., 2018).

ICA created a Task Force on Inclusion, Diversity, Equity & Access (IDEA) to address the systemic inequalities raised by the #CommunicationSoWhite discourse (Chakravartty et al., 2018). IDEA recognizes that historically disproportionate patterns of power and resources have systematically oppressed some identity groups over others and these patterns continue to shape the ICA organization and its members. One ICA journal has extended its usual singular

leadership to include four Editors-in-Chief from different countries for the first time to confront the challenges of inclusivity across scholarship (Ewoldsen et al., 2022). Additionally, the new Editorial Board consists primarily of women and scholars outside the U.S. (Ewoldsen et al., 2022), no doubt a response to the stark evidence of racial and gender inequities in publication and citation practices (Chakravartty et al., 2018; Mayer et al., 2017).

Building on these earlier efforts to diversify ICA leadership, this paper investigates our understanding of publication practices to examine whether individual scholars collaborate with scholars outside of dominant norms and diversify their research teams. Achieving progress for diverse and inclusive organizational practices requires member buy-in. How communication scholars have approached intersectional compositions of authorship (i.e., gender, race, affiliations) and collaboration would guide the direction in which diversity and inclusivity may be advanced in the ICA organization. This analysis hopes to serve as a model to show how far the field has come and how far it has to go.

Collaboration within Communication Scholarship

International collaboration creates an opportunity for communication scholars to construct new standards that differ from hegemonic or dominant norms. Co-authorship enables the experience of authors of various backgrounds and sociocultural contexts to come together to gain firsthand experience of diversity (versus discussing it as an abstract concept) and generates comprehensive scholarship as a result (Akkerman et al., 2006). Communication is a discipline ripe for collaborative work because of its interdisciplinary origins (Zhu & Fu, 2019) and inherently contextual practice. Conversely, the lack of diverse perspectives through discouraging

co-authorship works to silence alternative insights and evaluations (Chakravartty et al., 2018), maintaining and reinforcing dominant scholarship norms.

Despite calls to access greater knowledge through co-authorship, Demeter (2019) identified Communication as one of the most skewed fields in social science concerning the distribution of academic and intellectual capital. U.S. and Western Europe scholars dominate as the epicenter of global knowledge production, suggesting that their expectations, agendas, and perspectives determine the direction of theory, research, and teaching (Goyanes et al., 2022). The tendency for authors to collaborate only within specific regions and institutions significantly impacts the discipline as a whole.

Demeter (2019) found that the core Communication regions are located exclusively in the Global North and, therefore, determine the leading theories and ideas, the legitimacy of contributions, and the accepted forms of intellectual capital in the global knowledge production system. Thus, the need to collaborate with scholars from outside the U.S. or Western Europe is widely discussed in the discipline, but scholars already based in those regions are less incentivized to do so (Ou et al., 2012). Such influential power determines how many journals become "legitimized" through internationally recognized registries such as the Social Sciences Citation Index, or SSCI, Web of Science (Demeter, 2019). For example, there are many exceptional Asian and Latin-American communication journals. However, SSCI does not register journals from those regions, deeming such journals less "legitimate" than those registered (Demeter, 2019). As a result, compared to other disciplines, Communication receives the least outside-the-U.S. contributions and is the slowest at enhancing these disparities (Ang et al., 2020).

International scholars face additional barriers, especially students and early career scholars, such as language differences, appealing to unfamiliar readers and journals, and the need to adopt a new writing style for publications (Lauf, 2006; Tsoukas, 2008; Ou et al., 2012). There are also systemic barriers, such as the prestige of institutions when publishing within a given discipline (Demeter, 2019), making it more difficult for scholars to contribute if not at one of the dominating institutions driving theoretical advancement. These barriers further separate potential global collaborators from their peers, who see the cost of navigating barriers as higher than the return of international collaborative efforts. Because publication and authorship systems continue to reward homogenous teams (Chakravartty et al., 2018), authors have little incentive to include historically underrepresented groups or those outside U.S. and Western Europe institutions. Consequently, individual scholars can follow the status quo to continue benefiting from a system that regularly favors them without acknowledging their role in maintaining the continued exclusion of underrepresented groups.

Whiteness in Academia

Collaborations can occur between diverse individuals, an example of which is racial identity. In the manuscript *#CommunicationSoWhite*, Chakravartty et al. (2018) critically examined inequalities within publication rates, citation rates, and editorial positions leading Communication organizations to acknowledge the permeation of colonialism and maintenance of white supremacy within the field. While examining imbalanced publication practices, Chakravartty et al. (2018) revealed how these practices still today (re)produce and maintain racist values between white and non-white communication scholars, with white scholars

dominating publications, citations, editorial board positions in Communication journals and leadership positions in national and international associations.

Whiteness is the normalization of a universal point of departure in which those falling outside Anglo-European/American and largely U.S.-centric cultures are racialized and othered (hooks, 1984; Moussawi & Vidal-Ortiz, 2020). Whiteness becomes an assumed "norm" that fuels a colonial power system and the dehumanization, exclusion, and exploitation of non-white bodies (hooks, 1984; Collins, 1991). Chakravartty et al.'s (2018) examination of publication and citational practices evinces how normalized research practices mimic and support the maintenance of Whiteness. Relatedly, Mayer et al. (2018) examined communication publication and citation practices to uncover sexism within an overall lack of citations of research by women, even in fields primarily of women (Mayer et al., 2018; Chakravartty et al., 2018). Men benefit from their tight-knit authorship networks and citational practices (Mayer et al., 2018)—drawing connections between how Whiteness and patriarchal systems of power work together to maintain a white masculine academy and continue to oppress scholars who do not fit that standard.

Considering the harmful pervasion of Whiteness in communication, examining how inequitable practices permeate authorship practices to sustain barriers for underrepresented scholars is crucial. Through an intersectional framework examining overlapping systems of oppression (Crenshaw, 1991), this paper extends Chakravartty et al.'s (2018) earlier work to critically examine race, gender, and affiliations across five prominent international Communication journal publications. An intersectional understanding of collaboration patterns

contributes to calls for *authenticity* and editorial statements regarding diverse and inclusive practices.

Why Intersectionality Matters in Authorship Practices

Crenshaw (1991) first coined *intersectionality* to describe the historical and complex exchange of coexisting oppressions that Black women encounter (Noble & Tynes, 2016). Building from earlier conceptualizations of power and oppression (Davis, 1983; Collins, 1991), intersectionality states that forms of oppression always entangle, such as white supremacy and patriarchy. For example, a Black woman is simultaneously racialized as Black and gendered as a woman. She is never *only* Black or *just* a woman as she encounters oppression from both individualities, although one identity may become more salient at times (Crenshaw, 1991). Therefore, intersectionality grants the ability to examine and understand multiple intersecting identities, which is necessary for eliminating all forms of power and oppression.

An intersectional approach guides this analysis to recognize intersecting identities and move beyond singular or binary categories, such as white vs. non-white (Crenshaw, 1991 Ramasubramanian & Banjo, 2021). Whether aware of it or not, people simultaneously hold multiple identities that inform and shape their experiences and interactions. Just as Whiteness works to maintain racial oppression across racial identities, other societal hierarchies simultaneously oppress other identities, such as patriarchy, cis-heteronormativity, and Westernization. Intersectionality provides a foundation to examine overlapping and complex identities to acknowledge layered privileges, oppressions, and stigmatizations people encounter within the power dynamics of Whiteness.

Between Chakravartty et al. (2018) and Mayer et al. (2018), we can easily infer the lack of non-white and women representation in Communication scholarship and practices. However, these earlier observations examined only the first authors' race (Chakravartty et al., 2018) or only the gender (Mayer et al., 2018). Furthermore, although acknowledged as a limitation, Chakravartty et al. (2018) used U.S.-based census racial classifications to collapse race into dichotomous categories of white and non-white because most editorial boards of the selected journals were U.S. affiliated. Both studies demonstrated racial and gender disparities among publication and citational practices exist. However, an intersectional analysis of all authors' race, gender, affiliations, and collaborations provides an in-depth review of the layered complexities within an organization seeking to build a more diverse field. If ICA truly wishes to represent and facilitate an international discourse at the individual and institutional levels, then an intersectional approach is required to gain detailed insights for future inclusive practices. A desire to understand how intersectional experiences inform scholarship across race, gender, and affiliations guide our research questions.

RQ1: In the last two decades, how have scholars' (a) race, (b) gender, (c) affiliation country of origin, and (d) affiliation type in Communication scholarship changed?

RQ2: In the last two decades, how have Communication scholars collaborated, across (a) race, (b) gender, (c) affiliation country of origin, and (d) affiliation type?

RQ3: In the last two decades, how have Communication scholars approached intersectional authorship collaboration across (a) race, (b) gender, (c) affiliation country of origin, and (d) affiliation type?

Methods

We examine the race, gender, affiliation country of origin, and affiliation type (i.e., educational vs. non-educational) of all scholars between 2000-2022 in five peer-reviewed ICA journals: the *Journal of Communication*, *Human Communication Research*, *Communication Theory*, *Journal of Computer-Mediated Communication*, and *Communication, Culture, & Critique*. We chose these journals because they are recognized as flagship journals and represent diverse domains and methods in the field of Communication.

Data Collection

Using a Python script, we collected publicly available information from each selected journal between 1951 and June 2022, such as journal, title, date, DOI, issue number, author names, authorship position, and affiliation. In all, there were 7,708 papers and 13,603 authors. Author affiliation data from ICA journals did not include affiliation type (e.g., education, government, company) nor country locations (e.g., USA). We matched the available ICA data with the Research Organization Registry (ROR, n.d.), which provides rich data about affiliations such as country origin, affiliation type, and address to obtain the missing data. We first extracted exact matches from the ROR data. If exact matches did not exist, we searched for the best guess for each affiliation via the ROR application programming interface (API).

Analysis adhered to best practices for bibliometrics delineated by Donthu et al. 2021. This study sought to understand authors' compositions and collaboration patterns across 22 years of 5 Communication journals (Step 1) and used publication and co-authorship techniques (Step 2). Journals were selected based on their relevance to communication scholarship, and authors

made significant efforts to ensure data quality (e.g., data cleaning and inter-coder reliability; Step 3). Finally, we ran various analyses to answer our research questions (Step 4).

Research Versus Non-Research

Paper classification and ICR coding

The 7,708 papers collected were classified as either original scientific research or non-research (e.g., book reviews, ICA presidential addresses, special issue introduction). Since we are interested in the composition of and collaborations among communication scholars that research can best represent, we included only original scientific research papers in our study.

We operationalized "original" research as that which draws upon but should not be exclusively based upon earlier works. That is to say, it should not be merely a response to, or an interpretation of, earlier works. Original research should have their own viewpoints or findings. In this sense, book reviews are not "original" whereas a comprehensive literature review is original. Babbie (2010, p.94) argued that science is about "finding out" and discovering ways to find it out. Based on this argument, we concluded that scientific research should have a question, methods through which to answer the question, and a conclusion that "find outs" the answer.

Thus, we came to our definition of "scientific research": It should ask a scientific question, follow a research method, and come to conclusions that answer the question. Research methods include quantitative, qualitative, critical analysis, and mixed methods. If the article met the above two criteria, but the paper in question is an introduction to a special issue, a speech, or a committee report, we considered it non-research because it is not peer-reviewed.

For each of the 7,708 papers, we assigned a "research" or "non-research" label. The official website publishes each article under categories such as "Original Research," "Forum,"

"Colloquy," or "Book Review." After deduplication, there were 296 total categories. We reviewed each category and labeled those that did not fit under our "research" definition as "non-research" (e.g., Book Review). For unclear categories that appeared once, we reviewed all the papers in them and decided whether they were research papers. In all, we excluded 965 non-research articles.

We randomly selected 100 papers among the remaining 6,743 papers for initial inter-coder reliability (ICR). Three authors independently classified these 100 papers as "research" or "non-research" based on our operational definition of "original scientific research." The Krippendorff alpha was 0.83, above the acceptable threshold of .80 proposed by Krippendorff (2004). We then evenly split the 6,743 amongst the three independent coders who each coded 2,240 papers. A final ICR analysis of 100 randomly selected papers was conducted with a Krippendorff alpha of 0.79

Five papers without author names were then relabelled as "non-research" after finding they had been incorrectly coded as research papers. We accidentally identified another mistake and corrected it. Among all 7,708 papers, 5,813 (75.4%) were original scientific research articles with 11,471 individual authors. 133 authors in 95 papers did not contain affiliation information and thus were excluded, leaving 5,718 papers and 11,304 authors in our final analysis.

Race and Gender Coding

Following a similar protocol to Chakravartty et al. (2018), we obtained race predictions for each author based on surnames via a Python package ethnicolr2 API. Trained with 2010 U.S. census data, Ethnicolr2 includes four racial categories to assign race predictions: white, Black, Hispanic, Asian/Pacific Islander. After manually reviewing the API outcomes, we found

predictions to be unreliable. For example, API accuracy for East and South Asian surnames was low and coded several authors as white. Therefore, we decided to hand-code using official ICA membership racial categories: (1) White: e.g., German, Irish ancestry, English, et al., (2) Black: e.g., African American, Haitian, Nigerian, et al., (3) Asian: e.g., Chinese, Filipino, Asian Indian, et al., (4) Hispanic, Latinx, or Spanish Origin: e.g., Mexican, Puerto Rican, Colombian, et al., (5) Middle Eastern or North African: e.g., Lebanese, Iranian, Egyptian, et al., and (6) Indigenous: Inuit, Native American (e.g., Lakota, Sioux), Pacific Islander, et al. Racial classifications relied primarily on phenotype evaluations and supporting information found in online author profiles, such as explicit mentions of racial identity, location of undergraduate education, and research topics.

Similarly, we obtained gender prediction based on the authors' first names through genderize.io API. Coders then manually checked each entry against the gender prediction. The gender prediction rate based on first names of authors of East or South Asian descent and "gender neutral" names was low (e.g., Yan, Chen, Robin, Morgan). Therefore, we manually coded gender by examining explicit pronoun usage on faculty pages, publication websites, LinkedIn profiles, or personal websites. Pronouns she/her were coded as female, he/him as male, and they/them as nonbinary.

Six coders were trained to manually evaluate entries by viewing the online profiles of each author to select the best racial and gender categories. If online information was missing, coders relied on the original API predictions. Once coders had completed training, we randomly selected 100 authors among all 11,304 authors for inter-coder reliability (ICR) and achieved a Krippendorff alpha of 0.91 for race and 0.94 for gender. We then evenly split the 11,304 amongst

the six coders to begin coding the full dataset starting with 2022 and going backward to 1951. The current paper has preliminary results for all authors published between 2000-2022.

Results

Author Composition (RQ1)

The preliminary dataset included 3,169 papers and 7,083 authors published between 2000-2022 (see Table 1 in Appendix). Figure 1a depicts the change in the total number of publications over the last two decades. Numbers of articles peaked in 2014 and dropped in 2019. Figure 1b shows changes in the average number of authors per paper and indicated an increase from 1.94 in 2000 to 2.6 in 2022.

Race (RQ1a)

Among 7,083 authors, the majority of authors identified were white (75.6%). Authors identified as Asian represented 17.0% of all authorship, 4.0% of Hispanic, Latinx, or Spanish origin authors, 1.9% of Black authors, and 1.2% of Middle Eastern or North African authors. Only 16 (0.2%) were Indigenous authors. Together, white and Asian scholars accounted for more than 92.5% of all authors.

Between 2000-2022, the proportion of each race appeared stable over time, indicating little change, with white scholars maintaining the most significant proportion. White scholars represented about 70% or more of all authors each year—peaking at 91.0% in 2001—and dropping to 66.9% in 2019 and 67% in 2021 (Figure 1c). The share of Asian scholars showed an upward trend, starting at around 10% in the early 2000s but rose to and maintained roughly 20% authorship. Authors identified as Indigenous, Black, Hispanic, Latinx, or Spanish origin, and Middle Eastern or North African are present over the last two decades, but all fall below 7%.

Gender (RQ1b)

Authors identified as male represented 53.6% of all 7,083 authors, while female and nonbinary authors represented 46.2% and 0.1%. *CCC* is the only journal with a female author majority (n = 365, 57.1%). *CCC* and *HCR* had the most reported nonbinary authors (n = 4).

Over the last twenty years, the percentage of female authors showed an upward trend, starting at 43.3% in 2000, dropping to 40.3% in 2007, and stabilizing at around 50% in the past five years (Figure 1d). The first identified nonbinary author appeared in 2004, and results indicated only nine nonbinary authors published between 2000-2022.

Author Affiliation Countries of Origin (RQ1c)

Despite 62 countries present in all author affiliations, most authors were located in only a few countries. Authors' affiliations were predominantly in the U.S. (67.7%), followed by the Netherlands (4.9%), Germany (3.6%), Great Britain (3.2%), and Israel (2.4%). Authors from all other countries only accounted for 18.3% of all 7,083 (Figure 2a).

For temporal trends, the share of authors from U.S. affiliations showed a downward trend: declining from 79.5% in 2000 to 58.2% in 2021, with a slight increase within 2022 (Figure 2b). Authors from affiliations in the Netherlands, Great Britain, Germany, and Israel fluctuated between 0% and 10% over the past two decades, with Germany seeing a spike in 2021 and Netherlands in 2022. The share of authors from other countries increased from 9.4% in 2000 to around 20% by 2022.

When examining the proportion of papers with authors affiliated in the U.S., 72.3% contained at least one U.S.-based author (Figure 2c). Over the last twenty years, this proportion showed a downward trend (Figure 2d). In 2000, the proportion of papers involving at least one

U.S.-based author was 81.8%. This proportion peaked at 88.0% in 2001 and ended at 55.1% in 2022.

Affiliation types (RQ1d)

Almost all (96.0%) authors' affiliations were educational types (i.e., universities; see Figure 2e). Over the past two decades, only 282 (4%) authors' affiliations were non-educational (i.e., government, company, and NGOs).

Collaboration (RQ2)

Overall trends showed that the average number of authors per manuscript increased from 1.94 in 2000 to 2.56 in 2022 (Figure 1b). We examined co-authorship collaborations across (a) race, (b) gender, (c) affiliation country of origin, (d) affiliation type, plus combinations of these (i.e., across race and gender or gender and country). There was a limited number of cross-type papers; therefore, we did not include them in the subsequent combined analyses.

Figure 3a depicts the number of publications that are or are not collaborations across race, gender, affiliation country, and affiliation type. Cross-gender collaborations happened the most: 1,181 (37.3%) among all 3,169 papers. Cross-race collaborations (k = 748) appeared 23.6% of the time, 15.1% for cross-country collaborations (k = 479), and 5% for cross-type (k = 160). Combined analyses indicated that cross-gender and -race collaborations (k = 487) appeared in 15.4% of all papers, 9.8% for cross-gender and -country (k = 309), 6.7% for cross-country and -race (k = 213), and 4.8% for cross-gender, -race, and -country (k = 151).

Temporal trends of proportions for the above collaborations saw some changes over time (Figure 3b). All collaborations witnessed an upward trend except cross-type. In 2000, there were only k = 21 (23.9%) cross-gender collaboration papers, whereas this proportion has been above

35% since 2009, peaking at 45% in 2018. Cross-race collaborations started at $k = 15$ (17%) in 2000 and, in the past decade, have been around 25%.

Racial compositions of cross-race collaborations (Figure 3c) showed that 1,993 (62.9%) collaborations are by white-only authors, followed by Asian-only ($n = 318$, 10.0%), Hispanic, Latinx, or Spanish origin-only ($n = 50$, 1.6%), Black-only ($n = 40$, 1.3%), and Middle Eastern or North African-only papers (19, 0.6%). There was only one Indigenous-only paper. In terms of gender, there were 1,118 (35.5%) male-only papers and 864 (27.3%) female-only papers. There have been six nonbinary-only authored papers in the past two decades.

Time series analysis (Figure 3d) showed that the proportion of white-only and male-only papers indicated a downward trend. The proportion of white-only papers started at 77.3% in 2000 and dropped to 50.9% in 2021 but increased to over 60% in 2022. Asian-only and cross-race papers showed an upward trend. Cross-gender papers fluctuated greatly but, in general, increased. Other proportions were relatively stable.

Intersections of authorship (RQ3)

Analysis examining the intersection of (a) race and (b) gender indicated that white male authors ($n = 2,979$, 42.1%) made up the majority of all authors. White female authors made up the second largest majority ($n = 2,371$, 33.5%), followed by Asian female authors ($n = 622$, 8.8%), Asian male scholars ($n = 583$, 8.2%), Hispanic, Latinx, or Spanish origin female authors ($n = 149$, 2.1%), Hispanic, Latinx, or Spanish origin male authors ($n = 133$, 1.9%), Black female authors ($n = 73$, 1.0%), Black male authors ($n = 60$, 0.8%), Middle Eastern or North African female authors ($n = 47$, 0.7%), and Middle Eastern or North African male authors ($n = 41$, 0.6%). There were only 13 Indigenous female authors and 3 Indigenous male authors. Only $n = 4$ white,

n = 3 Hispanic, Latinx, or Spanish origin, and *n* = 1 Asian nonbinary authors were reported in the last two decades. The charts indicated that there were more Indigenous, Black, Hispanic, Latinx, or Spanish origin, Middle Eastern or North African, and Asian female authors than male authors of the same race. Conversely, there were fewer white female authors than white male authors (see Figures 4a & 4b).

Analysis of female authors by race found that the proportions for Indigenous, Black, Hispanic, Latinx, or Spanish origin, and Middle Eastern or North African fluctuated greatly over the last twenty years (Figure 4c). This shift is because the total numbers of these authors were small compared to white and Asian scholars each year. The female percentage among Asian authors fluctuated but showed an upward trend, mostly above 50% in the last decade. The female ratio among white authors was stable, between 40% and 50% over the last twenty-two years.

Additional details on collaboration flows

We examined two types of collaborations in detail: cross-country (*k* = 479; Figure 5) and cross-race and -gender collaborations (*k* =2,403; Figure 6). We assumed that the first authors initiated partnerships and constructed directional "collaboration pairs" starting from the first authors ("source") and going to all other authors ("target"). For example, for cross-country, if a paper had four authors, one (first author) from the U.S., two from China, and one from Spain, we constructed three pairs: US-CN, US-CN, and US-ES. For cross-race and -gender, if a paper had four authors, one (first author) is a white male (WM), two white female authors (WF), and one Latino male author (LM), we constructed three pairs: WM-WF, WM-WF, and WM-LM.

The final cross-country set of collaboration pairs (*n* = 744) accounted for 38 unique "source" countries, 53 countries for "targets", and 55 countries in all. The majority of

collaboration pairs were initiated by U.S.-affiliated authors (n = 279, 37.5%), followed by Germany (n = 76, 10.2%), Great Britain (n = 41, 5.5%), the Netherlands (n = 35, 4.7%) and the Philippines (n = 31, 4.2%). Overall, the U.S. appeared in 523 (70.3%) collaborations, followed by Germany (n = 124, 16.7%), Great Britain (n = 88, 11.8%), the Netherlands (n = 86, 11.6%), and China (n = 48, 6.5%). These proportions equaled more than 100% because 196 (26.3%) of all collaboration pairs were between these five countries; hence they were counted twice.

For cross-race and -gender collaborations, the majority of the 2,403 collaboration pairs were initiated by white male (n = 913, 38.%) and white female authors (n = 713, 29.7%), followed by Asian female (n = 291, 12.1%) and Asian male authors (n = 273, 11.4%). White male authors collaborated the most with white female authors (n = 586), followed by Asian female authors (n = 113) and the least with Indigenous female authors (n = 1), Black female authors (n = 12), and Middle Eastern or North African female authors (n = 12). White female authors collaborated the most with white male authors (n = 509), followed by Asian female authors (n = 74), and the least with Middle Eastern or North African male authors (n = 1) and Indigenous female authors (n = 1). Because there were so few reported Indigenous and nonbinary authors, they had no collaboration pairs initiated by them.

Discussion

Scholars must be active in their efforts to dismantle and decenter the normative foundations of Whiteness to confront the persisting legacies of colonialism within individual scholarly practices. This bibliometric analysis presented two decades of intersectional authorship composition and collaboration patterns across five ICA journals from 2000-2022. As an organization, ICA strives for more diverse and inclusive practices and has implemented

initiatives to have representative leadership. These preliminary results suggest improvements along U.S.-centric, racial, and gender lines since 2000; however, significant disparities remain. An intersectional analysis emphasizes that collaborations require tremendous efforts to foster diverse research teams across race, nonbinary, and international lines.

The increase in the number of publications each year remained steady but dropped significantly in 2019—understandably from a global pandemic putting the world on hold. After 2019, the average number of authors per manuscript significantly rose, suggesting more collaborations. Collaborations have also become more diverse in recent years, although results still mimic #CommunicationSoWhite in that white and male authors have consistently dominated most of the Communication authorship. These historically dominating trends have primarily decreased in the last twenty years, such as the number of white-only publications, male-only publications, and the proportion of U.S.-affiliated authors. However, more efforts, especially by those holding a majority across race, gender, and affiliations, must be made if we are ever to disrupt dominant norms and influence the field in more diverse and inclusive knowledge production.

Recently, ICA's 2023 annual conference began asking scholars submitting panel submissions to "include contributions from at least two different countries; not more than one contributor from a single faculty, department or school; and generally be mindful to consider panelist diversity" (Lee, 2022). These efforts are essential and directly reflect calls for intervention from Mayer et al. (2018), asking for more than just critiques of "manels" or man-only panels. We should consider the slow progress of underrepresented groups presented in the current study (across gender, race, and affiliations). Therefore, it is reasonable to ask scholars

collaborating on research projects and publications to adhere to similar standards at all levels. In that case, just as a focus on gender representation has led to nearly equal proportions in the last twenty years, it seems possible to alter the course of the relatively unchanging trends, such as the number of Black and Middle Eastern or North African authors presented. However, we cannot take another twenty years. Efforts must be more specific and forthright in calling out Whiteness, such as assembling collaborations without white, male, or U.S.-affiliated author majorities, rather than asking that scholars be "generally mindful" of diversity.

Maintaining Whiteness in collaborations

The average number of authors on manuscripts has been steadily increasing, however the racial, gender, affiliation countries, and type play a large role in maintaining power structures rooted in Whiteness. The results from this study are concerned with how little the representation still is for Indigenous, Black, Middle Eastern or North African, Hispanic, Latinx, or Spanish origin, and Asian authors, especially when considering that white individuals do not make up the global majority (Afuape et al., 2022). Even though we see decreases overtime of white only papers and U.S.-centric collaborations, the legacies of Communication practices and theory building rely on the previous contributions of a predominantly white, male, and U.S.-based knowledge-system. Most of the journals still reflect these patterns, especially *CT*, which describes itself as “an international forum publishing high quality, original research into the theoretical development of communication from across a wide array of disciplines…” (CT, 2022). *CT* stood out in having the least representation from authors outside of a white, male, and U.S.-centric model. Younger journals, like open-access *JCMC*, and journals more open to critical

and cultural work like *CCC*, stand out in having the largest proportion of underrepresented authorship, and thus different perspectives, outside of the norm.

Although our 2022 data is based only on half of the year, it is concerning to see such a significant increase in white only papers and decreases in cross-country, cross-race, and cross-gender & -race collaborations—especially after trends suggesting progress had been made in these areas over the past two decades. If research collaborations continue to be homogeneous across perspectives, then we must recognize that this knowledge-production is fundamentally limited as it perpetuates from the original Whiteness center.

Even though there is such less representation reported for Indigenous, Black, Middle Eastern or North African, Hispanic, Latinx, or Spanish origin, and nonbinary authors, we cannot deny that they have not always been present in the last twenty years. Therefore, the issue remains with those who have consistently held the largest proportions of access and power. As Chakravartty et al., (2018) state, "we must all be more attentive to our own racialized (and gendered) citational practices (p. 261)," and we must extend this to include our research networks at individual and institutional levels.

Implications

Tracing authorship and collaboration patterns matter because data can reveal the way barriers continue to exist for historically underrepresented scholars. Results reveal that predominantly white men and women in the U.S. still drive the Communication canon. As Chakravartty et al. (2018) state, acknowledging representation in Communication is not simply to look at differences; it is about recognizing systemic power structures within knowledge production and strengthening efforts to disrupt them. We all need to be more critical of whom we

are working with in the same way we often cite work we already know (Chakravartty et al., 2018). When we only work with people we are friendly with or similar to us (same racial, gender, and institutional backgrounds), it makes it harder for those outside these circular networks to contribute to knowledge-making, often deeming underrepresented insights less legitimate. Scholars in admission and hiring decision-making positions can be intentional with whom they give space through graduate assistantships, graduate committees, postdoc hires, and early career positions.

These findings have tangible implications for authors and the discipline as a whole. If we compare these preliminary results with the latest membership survey data from ICA's IDEA task force, those who have completed the survey (n = 927) show a similar majority of white racial identities (60.3%), followed by East Asian (14.8%) and South or Southeast Asian (9.2%). Conversely, members report Hispanic, Latino/a/x, Caribbean, Central or South American at 9.2%, Black or African at 5.6%, Middle Eastern or North African at 2.4%, and Native or Indigenous as 0.7%. The latter numbers indicate that current authorship rates may not match the current membership rates of ICA. Furthermore, gender membership suggests a women majority (58.1%) followed by men (37.1%) and non-binary/third gender members (0.9%). Although direct links cannot be determined from this data, ICA authorship should represent ICA membership to some degree since these are scholars invested into the organization. Similar initiatives could look at the current study and IDEA's survey to inform decisions regarding diverse, inclusive, equitable, and accessible practices in research teams, authorship, membership, and leadership of the organization from the ground up.

Limitations and Future Directions

We must highlight limitations in our approach to illustrate systemic problems with the artificiality of categories used to understand diversity (e.g., race) and how these classifications rely on homogenizing complexity at various levels. First, ICA journals are only published in English, which inherently restricts the perspectives added to an international discourse and fundamentally limits our study. Scholars must publish in these five journals to legitimize their research products. Understanding how historical imbalances of power reflect and (re)produce in the authorship and collaborations of these journals are essential. We plan to continue our analyses to include papers published from 1951-2000 to illustrate trends better and provide a comprehensive look at the state of collaborative authorship.

Power in a name

Our study followed a protocol similar to Chakravartty et al. (2018), using an API to match author surnames with frequently-occurring surnames in the 2010 census to predict the authors' racial/ethnic group. Although the U.S. census data may contain a proportionate racial representation of surnames within the U.S., using this method to determine an international model of surnames proved to be widely inaccurate for our study objectives. While we acknowledge that data based only on U.S. names for international authors is a limitation in its own right, the API hardly recognized Black or Asian scholars correctly. It did not even include Middle Eastern or Northern African, and Indigenous categories as options. This limitation is partly due to the system itself. The U.S. Census has historically categorized Arab Americans as white (Kayyali, 2013), highlighting the complexity of those identities and the political implications of erasing them. Additionally, many Filipino scholars have Spanish surnames due to the legacies of Spanish colonialism in the Philippines (Pérez-Stable et al., 1995). With high

accuracy rates, the API incorrectly identified these scholars as Hispanic, while researchers could hand-code them as Asian correctly. Between the drastic white and non-white scholars' disparities noted in the #CommunicationSoWhite, examining these differences through hand-coding across six racial categories allowed for a more nuanced interpretation of power dynamics.

On the other hand, this reinforces concerns about technology-driven bias. Similar inconsistencies find that other technologies, such as facial recognition, are consistently worse at identifying Black faces (Cavazos et al., 2021), reflecting the biases inherent to their creators. Noble (2018) emphasized that even the most sophisticated algorithms cannot account for historical inequalities built around racial hierarchies. During an analysis of Google search engines, Noble documents how algorithms often (re)produce social hierarchies because those designing the code do not account for systemic oppression and historical power imbalances (2018). This bias is particularly concerning because the census data is a baseline for numerous studies that analyze race, but this study shows it cannot do this effectively. Scholars should be careful when using this data or when trusting technology that leverages it, as neither is a guarantee for meaningful representation. Our methodological experiences lead us to propose that relying on APIs for predicting race based on surnames is vastly inaccurate and requires the additional effort of hand-coding to account for the complexities of racial hierarchies.

The coding process itself was another limitation. While the API was used as a reference point when crucial identifying information was absent, the coding process still partially relied upon visual information to code race and gender. These kinds of visual cues can erase more complex intersectional identities (Jordan-Zachery, 2013) but also relies on coder perception to categorize the identities of others. While our coding adhered to best practices, authors still

needed to identify themselves. Future research could attempt to directly incorporate the author's perspectives.

Coding racial identity rather than ethnicity was a choice made by the authors to expand upon previous research in the discipline (ex., Chakravartty et al., 2018). However, it can oversimplify the complexity of ethnicities, particularly for international authors. Each racial coding category included large numbers of different cultures, geographic locations, and experiences not preserved in the coding. While these categories preserve more complexity than many communication studies, such as white vs. non-white (Hatfield et al., 2022), they cannot represent the spectrum of identities in communication scholarship. Coding Hispanic authors, for example, also means that authors from Spain are identified within a particular category while condensing others into white. Similarly, coding Asian includes East and South Asian representation, despite significant differences between the regions' ethnicities. Future research should explore how ethnicity impacts collaboration patterns and consider how influential Whiteness can be within racial groups.

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Appendix

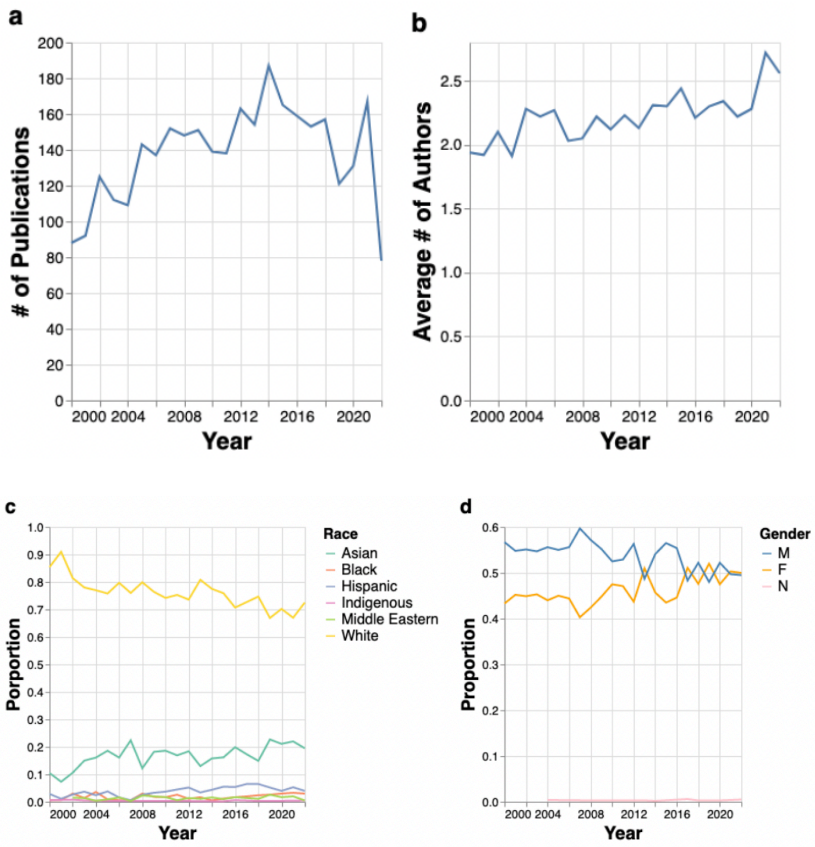
Table 1

Summary of Key Journal Characteristics

	CCC	***CT***	***HCR***	***JCMC***	***JOC***	**Total**
***K* (papers)**	459	494	517	733	966	3169
***N* (Authors)**	639	786	1386	1791	2481	7083
Avg. per paper	1.39	1.59	2.68	2.44	2.57	
Race						
Asian	107	77	235	406	381	1206
Black	31	15	15	15	57	133
Hispanic, Latino, & Spanish origin	35	27	53	77	94	286
Indigenous	3	2	5	3	3	16
Middle Eastern & North African	13	9	12	25	29	88
White	450	656	1066	1265	1917	5354
Gender						
Female	365	322	659	808	1121	3275
Male	270	464	723	983	1359	3799
Non-binary	4	0	4	0	1	9
Country (*N* = 62)						
US	437	534	1086	1022	1715	4794
Other (*n* = 57)	114	143	149	502	386	1294
Netherlands	6	21	78	107	133	345
Germany	7	32	32	51	131	253
Great Britain	54	19	19	78	54	224
Israel	21	37	22	31	62	173

Figure 1

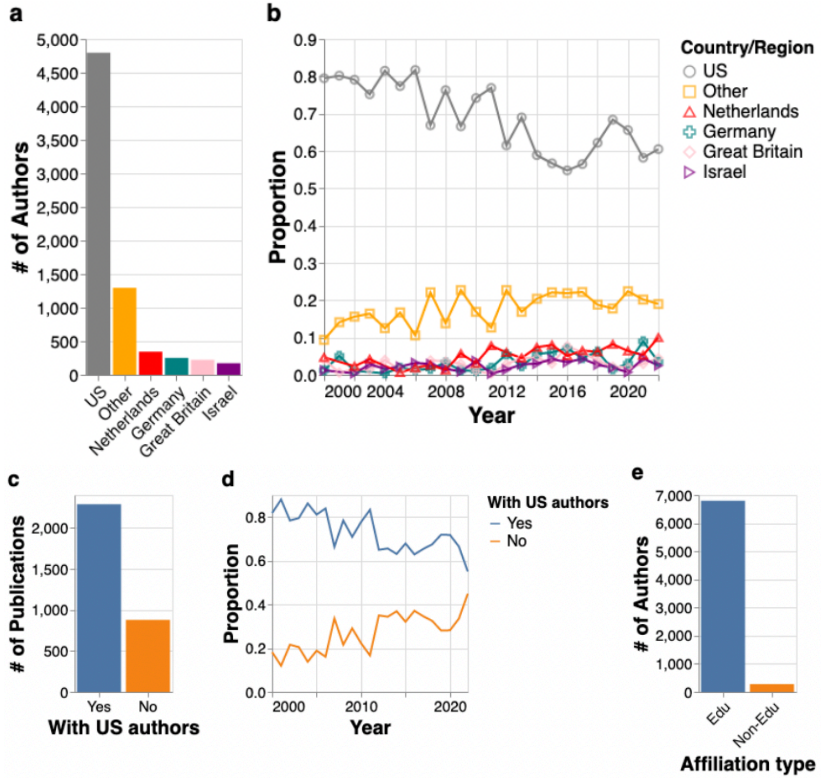
General Trends, Race, and Gender



Note. (a) # of publications by year. (b) Average # of authors per paper by year. (c) Proportion of authors of different races by year. (d) # of authors of different genders by year.

Figure 2

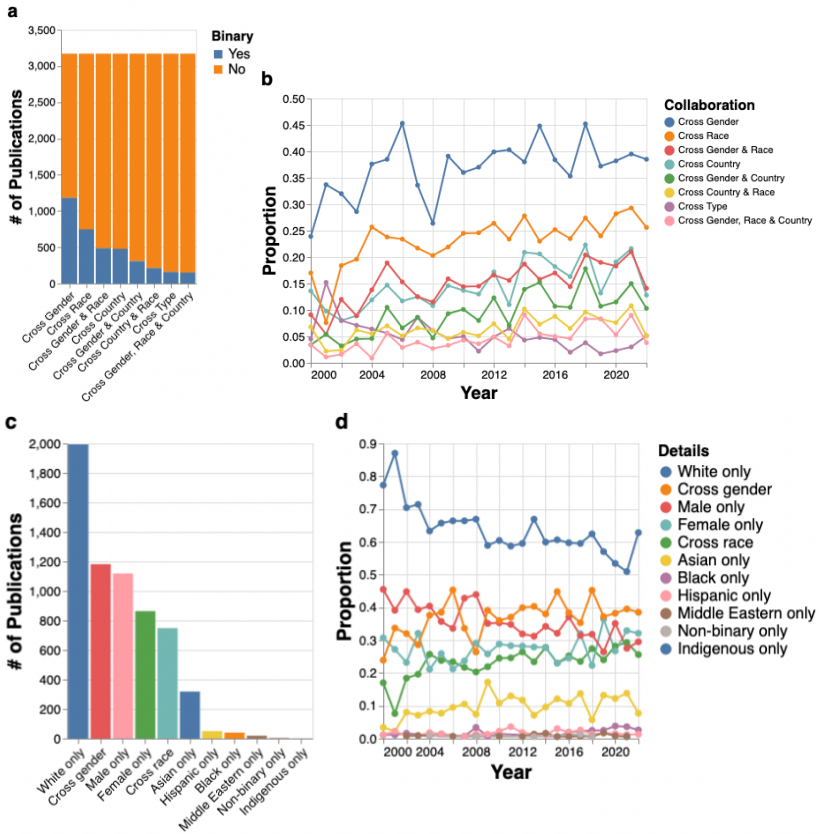
Country and Affiliations



Note. (a) Distribution of authors (b) Changes in the proportion of authors (c) # of publications with at least one U.S.-based author (d) Changes in the proportion of publications with at least one U.S.-based author (e) # of authors from educational vs. non-educational affiliations

Figure 3

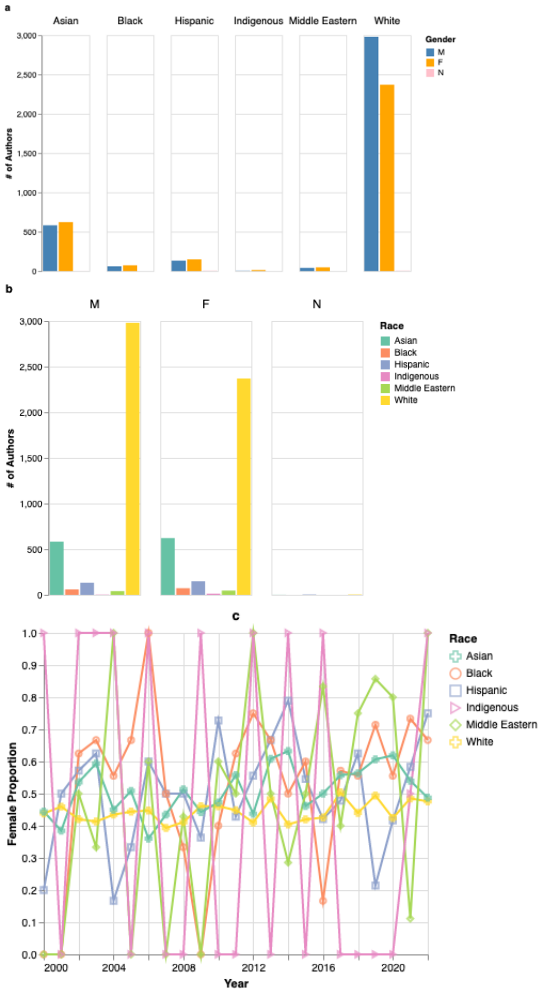
Collaborations



Note. (a) # of publications by collaboration type. (b) Changes in the proportion of publications by collaboration types. (c) # of publications by race and gender composition (d) Changes in the proportion of publications by race and gender composition

Figure 4

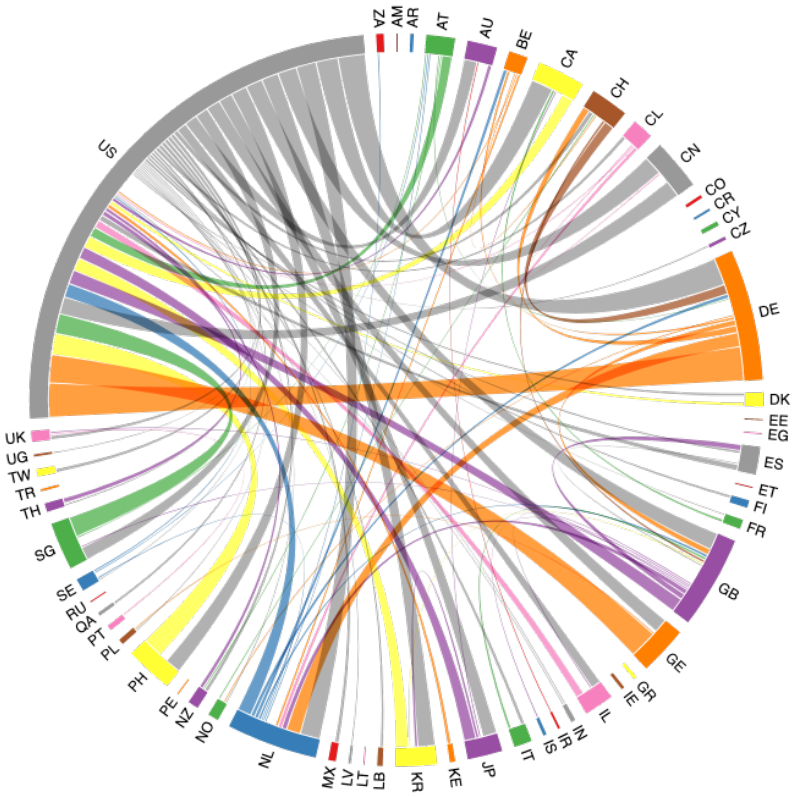
Intersections of Authorship



Note. (a) Distribution of race by gender. (b) Distribution of gender by race. (c) Changes in the proportion of female authors in racial groups.

Figure 5

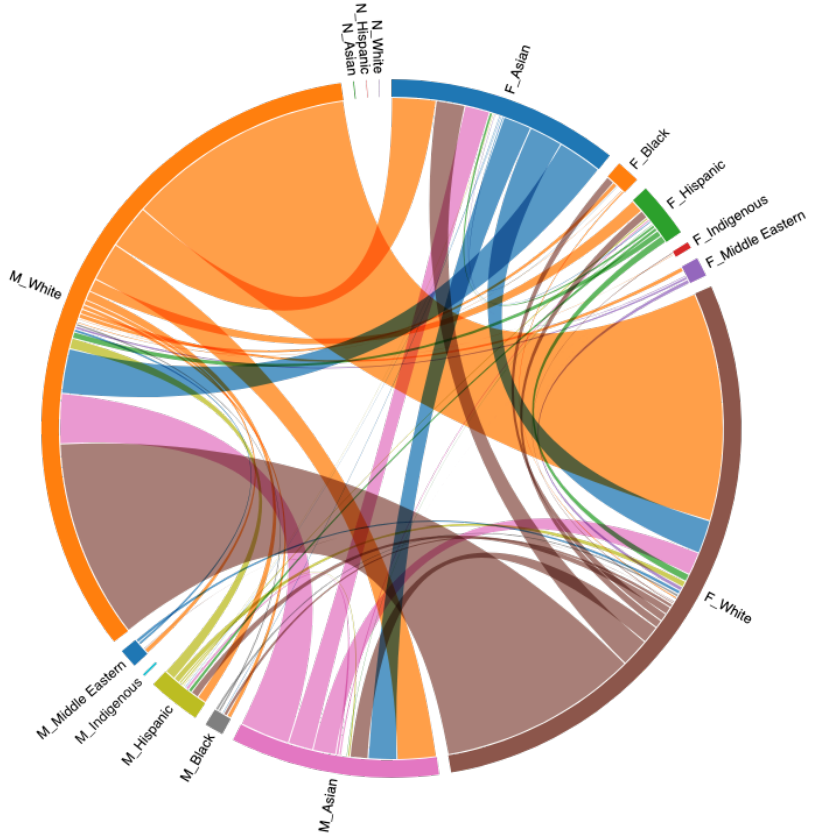
Collaboration Networks of Affiliation Countries/Regions



Note. Each chord represents the number of collaborations initiated by first authors to co-authors.

Figure 6

Collaboration Networks by Race and Gender



Note. Each chord represents the number of collaborations initiated by first authors to co-authors.